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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,019	12/20/2001	Bodo Kuhn	3955/59156-101	1141

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EXAMINER

MAMMEN, NATHAN SCOTT

ART UNIT	PAPER NUMBER
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3671

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/027,019

Applicant(s)

KUHN ET AL.

Examiner

Nathan S Mammen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5, 7-9 and 24-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5, 7-9, 24-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment filed 1/14/2004 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: Claim 5 now recites "wherein a speed of the air stream...is adjusted by **varying a rotational speed of one of the said forced draught-fan** or said exhaust fan" (emphasis added). Similarly, claim 7 now recites "the control and regulating device...sends an **output speed change value to one of said forced draught fan** or said exhaust fan" (emphasis added). There is no support in the original disclosure for limitations of varying the speed of the forced draught fan. Only the speed of the exhaust fan is disclosed as being varied. See, e.g., specification, page 7, lines 4-9. In addition, claim 25 states that "said forced draught fan has at least two exhaust ducts." That limitation is not disclosed in the specification, nor is it discernable from the originally filed drawings. Only one air stream (31) is indicated in the drawings.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Objections

2. Claim 6 is objected to because of the following informalities: Claim 6 is listed as a pending claim. However, claim 6 was canceled in the amendment filed 10/09/03. If applicant intends to reclaim the subject matter in claim 6, the claim should be presented as a new claim in proper numbering. Accordingly, since claim 6 is canceled, it will not be addressed in the Office Action. Appropriate correction is required.

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3. Claim 24 is objected to because of the following informalities: Claim 24 recites "preset speed valve." It is believed that Applicant meant to state "preset speed value." Appropriate correction is required.

4. Claim 26 objected to because of the following informalities: There are two claims numbered as 26, each reciting the same limitations. See amendment pages 3 and 4. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 5, 7-9, 24-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. See paragraph 1, above.

In view of the objections and rejections for new matter, the claims will be treated as if the new matter were not present.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 5, 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,586,033 to Hall (previously cited) alternatively and collectively in view of U.S. Patent No. 5,215,500 to Kirby, U.S. Patent No. 5,082,186 to Bruns, and U.S. Patent No. 4,617,942 to Garner.

The Hall '033 patent discloses an agricultural machine having a crop processing working unit (32), a plurality of crop transport units (40, 42, 46, 36) operatively assembled as a straw walker step, a cleaning device (48) having a forced-draught fan (50), and an exhaust fan (44) located after the cleaning device. The transport units are spaced apart to define a crop through gap. The crop transport streams convey crop streams in opposite directions (i.e., the straw walker step oscillates the crop backwards, and the oscillating pan 46 directs the crop towards pan 36). The transport units (40, 42) are located between the forced-draught fan and the exhaust fan and the forced-draught fan produces an air stream which is directed from the forced-draught fan to the exhaust fan. The forced-draught fan creates two air streams – divided by the cleaning device (48). What the Hall '033 patent does not disclose is that the air stream speed is adjusted by varying the rotational speed of the exhaust fan. The Kirby '500, Bruns '186 and Garner '942 patents each disclose a means for varying the speed of the exhaust fan (see Kirby, col. 3, lines 55-58; Bruns, col. 3, lines 35-38; Garner, col. 3, lines 19-30). It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the agricultural machine of the Hall '033 patent with a variable exhaust fan as taught by the Kirby '500, Bruns '186 and Garner '942 patents, in order to provide a means for controlling the discharge velocity

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and pattern (i.e., width) of the chaff and straw. Since the exhaust fan by the nature of fluid mechanics creates a "draw" in the cleaning device, thus assisting the forced-draught fan in creating an air stream, adjusting the speed of the exhaust fan will inherently adjust the air stream speed.

9. Claims 7-9, 24 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,586,033 to Hall alternatively and collectively in view of U.S. Patent No. 5,215,500 to Kirby, U.S. Patent No. 5,082,186 to Bruns, and U.S. Patent No. 4,617,942 to Garner, and further in view of U.S. Patent No. 6,591,145 to Hoskinson.

As stated in paragraph 2 above, the Hall '033 patent in view of the Kirby '500, Bruns '186 and Garner '942 patents teach an agricultural machine having a variable speed exhaust fan. What the combination does not teach is an air speed measuring device for measuring air speed and a control and regulating device for controlling the air speed in response to the sensed air speed. The Hoskinson '145 patent teaches that it is known in the art to provide an agricultural machine with a sensor to measure air speed (col. 7, line 51 and col. 9, lines 44-45). If the senses air speed is not at a preset target speed value, a control and regulating device acts to increase the speed of the fan. While the regulated fan of the Hoskinson '145 patent is a forced-draught fan, in light of the broad teachings of the Hoskinson '145 patent, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide an agricultural machine as taught by the Hall '033, Kirby '500, Bruns '186, and Garner '942 patents with the air speed sensor and fan speed control as taught by the Hoskinson '145 patent to control the exhaust fan speed, so as to improve threshing operations by reducing grain loss (Hoskinson – abstract).

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Regarding claims 8, 9, 24: The Hoskinson '145 patent teaches that the desired air stream speed is dependent on crop type (col. 3, lines 64-66). The Hall '033 patent discloses that the desired air stream speed is determined as a function of crop throughput or moisture content in the crop (Fig. 4a). The user can select an air speed value. Col. 3, lines 8-13.

Response to Arguments

10. Applicant's arguments filed 1/14/2004 have been fully considered but they are not persuasive.

Applicant's arguments that Hall's straw spreader is "not a fan" and "does not" create an air flow are without merit. Outside of a vacuum, which clearly is not the normal location for the Hall harvester to operate, it is physically impossible for straw to be spread outwards, which Hall clearly does, without "spreading" air outwards too.

As far as Applicants repeated insistence that the straw spreader is not a fan, Applicant's own specification and common definitions belie any interpretation of "exhaust fan" to mean a fan that only blows air. On page 6, lines 16-18, Applicant states that the exhaust fan can be "a crop comminutor." Again, on page 7, lines 20-23, Applicant refers to the exhaust fan distributing the crop over the field. This function is, in fact, what Hall's straw spreader accomplishes. Also, by definition, "fan" is defined as "2b: a device that consists of a series of vanes radiating from a hub rotated on its axle by a motor." Merriam-Webster's Collegiate Dictionary, 10th Ed. "Vanes" are "2: a **thin flat** or curved object that is rotated about an axis by a flow of fluid or that rotates to cause a fluid to flow..." *Id.* (emphasis added). Furthermore, "exhaust" means to "discharge, empty." *Id.* The straw spreader (44) of Hall clearly is shown as

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a series of vanes radiating from a hub which is rotated on its axle. See Fig. 1. The straw spreader serves to discharge, or "exhaust," straw. **Thus, the straw spreader of Hall meets each structural and functional limitation required by applicant's claim.**

Furthermore, Applicant's argument that any air stream created by Hall "would be vertical and neither horizontal nor aligned with the direction of crop throughput" ignores two important facts. First, Applicant never claims a "horizontal or aligned" air stream. Second, a fluid, including air, is a "substance tending to flow or conform to the outline its container." *Id.* Thus, even if immediately above the straw spreader the air stream is vertical, the air stream being pulled out of the rear of the harvester will not necessarily be vertical (although it certainly would include a vertical component).

Regarding Applicant's arguments with respect to claims 8 and 9: The control system has a memory relating to a crop type and then uses that memory to control operations of the harvester. See col. 10, lines 23-31. The harvester controller adjusts components to achieve optimum configuration of the combine. *Id.* As stated above, one of the variables is moisture. Thus, either inherently or obviously, the air speed would be adjusted to achieve an optimal configuration for the variable.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

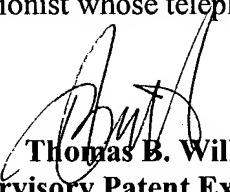
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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Mammen whose telephone number is (703) 306-5959. The examiner can normally be reached Monday through Thursday from 6:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will, can be reached at (703) 308-3870. The fax number for this Group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-1113.


Thomas B. Will
Supervisory Patent Examiner
Group 3600

NSM
5/3/2004

Nathan S. Mammen